Attachment 11: Program Preferences

Contents

Program Preferences

Overview

The purpose of this attachment is to describe how implementation of the projects included in this Proposal will meet specific Program Preferences, as referenced in Section II.F of the *Proposition 84 and 1E IRWM Program Guidelines* (August 2010). Key to this Proposal are the number of projects meeting two of the primary Program Preferences; addressing long-term drought preparedness, and addressing critical water supply or water quality needs of disadvantaged communities (DACs) within the region. Of the four projects presented herein, all four projects improve drought preparedness, while two of these projects address DAC water needs directly and the other two address the need indirectly. As discussed in more detail in Attachment 12 – Disadvantaged Community Assistance, the implementation of the Lake Camanche Tank Rehabilitation & Lateral Replacement Project and the West Point Water Main & Tank Replacement Project will address water supply reliability and water quality within the DACs of Lake Camanche Village and West Point, both identified DACs.

In addition to the Program Preferences fulfilled by the projects herein, many of the Statewide Priorities listed in Table 1 of the *Guidelines* are also addressed by this Proposal. Specific Program Preferences and Statewide Priorities are discussed in more detail in the following sections. The projects included in the Proposal are briefly summarized in Table 1.

Table 1: Projects Included in the Mokelume/Amador/Calaveras Proposition 84 Implementation Grant Proposal

Project	Description	Implementing Agency
Lake Camanche Tank Rehab & Lateral Replacement	Fabricate and install flexible geomembane liners in 5 existing, leaking redwood storage tanks in the Lake Camanche Water Improvement District No. 7 (WID#7), as well as replace 200 of the polyethylene service laterals in the system.	Amador Water Agency
Amador Water System Leak Detection & Repair Program	Implement Phase 1 of a lead detection and repair project. In Phase 1, install a system of 18 "master meters" on key pipelines with the Amador Water System to determine which pipes experience the greatest water loss and require replacement or repair. Collect and analyze meter data and develop a prioritized pipeline repair and replacement program to address leaks.	Amador Water Agency
West Point Water Main & Tank Replacement	Replace 6,600-feet of CCWD's deteriorating water main and construct a new 50,000-gallon steel water storage tank to replace the leaking redwood water storage tank in West Point.	Calaveras County Water District
Camanche Regional Water Treatment Plant Phase 1	Phase 1 project to install 6,000 linear feet of 12-inch diameter HDPE pipeline from Mokelumne Aqueducts to existing Camanche water treatment plant, and ultimately to a new regional water treatment plant, once constructed. Overall project components (all phases) include a 0.5 MGD membrane filtration water treatment plant at Camanche South Shore Recreation Area (CASS), a new raw water pipeline (the Phase 1 project) and a new cross-Camanche Reservoir treated water pipeline from CASS water treatment plant to Camanche North Shore Recreation Area (CANS).	East Bay Municipal Utility District

Program Preferences

Table 2 shows which Program Preferences this Proposal will contribute to meeting. Each of the Program Preferences that will be met is discussed in greater detail in the following sections.

Table 2: Program Preferences Met by Proposal

Program Preference	Projects included in Proposal			
	Lake Camanche Tank Rehab & Lateral Replacement	**Amador Water System Leak Detection & Repair Program**	**West Point Water Main & Tank Replacement**	**Camanche Regional Water Treatment Plant Phase 1**
Include Regional Projects or Programs		× High Level of Certainty	× High Level of Certainty	× High Level of Certainty
Integrate Water Management Programs within a hydrologic region				
Effectively resolve significant water-related conflicts				× Moderate Level of Certainty
Contribute to attainment of CALFED Bay-Delta Program objectives				
Address critical water supply/quality needs of DACs	× High Level of Certainty		× High Level of Certainty	
Integrate water management with land use planning				
SWFM projects that provide multiple benefits and are not receiving funding				
Address Statewide Priorities				
Drought Preparedness	× High Level of Certainty	× Moderate to High Level of Certainty	× High Level of Certainty	× High Level of Certainty
Use and Reuse Water More Efficiently	× High Level of Certainty	× Moderate to High Level of Certainty	× High Level of Certainty	
Climate Change Response Actions	× Moderate to High Level of Certainty	× Moderate to High Level of Certainty	× Moderate to High Level of Certainty	× Moderate to High Level of Certainty
Expand Environmental Stewardship				
Practice Integrated Flood Management				
Protect Surface Water and Groundwater Quality				
Improve Tribal Water and Natural Resources				
Ensure Equitable Distribution of Benefits	× High Level of Certainty	× High Level of Certainty	× High Level of Certainty	× High Level of Certainty

Program Preference: Include Regional Projects or Programs

Per Section II.F of the *Proposition 84 and 1E IRWM Program Guidelines*, preference is given to Proposals that include regional projects or programs. As described in the California Water Code, "Regional projects or programs means projects or programs identified in an integrated regional water management plan that accomplish any of the following:

(a) Reduce water demand through agricultural and urban water use efficiency.

(b) Increase water supplies for any beneficial use through the use of any of the following, or other, means:

(1) Groundwater storage and conjunctive water management.

(2) Desalination.

(3) Precipitation enhancement.

(4) Water recycling.

(5) Regional and local surface storage.

(6) Water-use efficiency.

(7) Stormwater management.

(c) Improve operational efficiency and water supply reliability, including conveyance facilities, system reoperation, and water transfers.

(d) Improve water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff.

(e) Improve resource stewardship, including agricultural lands stewardship, ecosystem restoration, flood plain management, recharge area protection, urban land use management, groundwater management, water-dependent recreation, fishery restoration, including fish passage improvement, and watershed management.

(f) Improve flood management through structural and nonstructural means, or by any other means. (CWC §10537)"

Three of the four projects contained in this Prop 84 Implementation Grant Proposal meet this criteria: the Amador Water System Leak Detection & Repair Project, the West Point Water Main & Tank Replacement Project and the Camanche Regional Water Treatment Plant Project. The Amador Water System Leak Detection & Repair Project is a regional project contained in the 2006 Mokelumne/Amador/Calaveras (MAC) Integrated Regional Water Management (IRWM) Plan. The focus of the first phase of this project is the identification of leaks in the Amador Water System, and development of a prioritized list of pipeline repairs and replacements (to be completed in subsequent project phases). This project reduces water demand and promotes water use efficiency by identifying water waste and working towards improving system reliability and reducing operations and maintenance costs.

The West Point Water Main & Tank Replacement Project is also a regional project in that it was included in the 2006 MAC IRWM Plan. This project directly benefits a regional DAC, and, through its implementation, promotes water use efficiency and conservation. The West Point Project remediates existing system leaks and failures, improving system reliability and reducing operations and maintenance costs. The West Point Water Main & Tank Replacement also increases local surface storage and supplies and improves drinking water quality by replacing the existing leaking redwood tank with a new steel tank, allowing for increased storage volumes and preventing bacteria introduction by small animal burrowing.

The Camanche Regional Water Treatment Plant (WTP) Project is a regional project that will benefit numerous areas within the Mokelumne/Amador/Calaveras (MAC) Integrated Regional Water Management (IRWM) planning region. Once the Camanche Regional Water Treatment Plant Project is fully implemented, it will address the water needs of three separate water system purveyors: Amador Water Agency (AWA), Calaveras County Water District (CCWD), and East Bay Municipal Utility District (EBMUD). A phased approach will be applied relative to the project's design and construction. Phase 1, for which grant funding is sought via this Proposal, is the construction of an approximately 6 mile long, 12-inch diameter pipeline that will connect two of the three EBMUD Mokelumne Aqueducts to the existing water treatment plant, located adjacent to the Camanche South Shore Recreation Area (CASS). As part of the Phase 1 project, the new Mokelumne Aqueduct to CSS Water Treatment Plant (WTP) pipeline will be connected to the existing Camanche Water Treatment Plant initially, providing better-quality Pardee Reservoir water for treatment and delivery. This connection will then be severed when the new water treatment plant is constructed.

There have been multiple feasibility studies and reports conducted over the last 20 years to improve potable water service in the Camanche area of Calaveras and Amador Counties. Since the mid-1960s, EBMUD has operated a water treatment plant on lands adjacent to Camanche Reservoir, serving the Camanche North Shore Recreation Area. This water treatment plant has reached the end of its useful life and is outdated. In addition, since Camanche Reservoir is the water source (and since the Reservoir serves as a recreational feature for the local community), there is a need to consider if other means or methods of sourcing water can be identified in order to reduce bacterial loading to the treatment plant. This need resulted in the idea of tapping one or more of the Mokelumne Aqueducts, which draw their water from EBMUD's upstream Pardee Reservoir.

In the late 1990s, representatives from EBMUD, AWA and CCWD (together with the local community) identified that there was a shared need to address water supply and quantity issues that each agency faced within the areas surrounding Camanche Reservoir. A partnership between the three water supply agencies was formed, and the concept of a regional WTP serving the combined localized needs of said agencies was envisioned. Since that time, work on the effort has included preliminary engineering efforts as well as

environmental review. The need for the project was seen as critical, hence warranting its inclusion in the 2006 MAC IRWM Plan.

The Camanche Regional WTP Project, as a whole, includes the design and construction of a 0.5 MGD membrane filtration water treatment plant at Camanche South Shore Recreation Area (CASS), a new raw water pipeline to provide raw water from the Mokelumne Aqueducts to the new treatment plant (the Phase 1 project for which grant funding is being sought), and a new cross-Camanche Reservoir treated water pipeline from CASS WTP to provide treated water to the Camanche North Shore Recreation Area (CANS). The 0.5 MGD plant will be designed such that it can be expanded to treat up to 2.0 MGD without significant building or facility alteration. This additional capacity could be used to supply neighboring areas of Amador and Calaveras Counties, including the Lake Camanche Village area (a DAC), Burson and Wallace, as needed and as based on a number of factors (water supply, water quality, etc.).

The Phase 1 effort, for which funding is sought via this Proposal, is the construction of the Mokelumne Aqueduct to CSS WTP pipeline that will be required to connect the new regional WTP to two of EBMUD's aqueducts. However, the overall project is regional in nature and will thus provide benefits to multiple agencies and the MAC Region in entirety.

Program Preference: Address Critical Water Supply or Water Quality Needs of DACs within the Region

This Proposition 84 Implementation Grant Proposal for the MAC IRWM Region includes two projects that will directly address critical water supply and quality needs of DACs: AWA's Lake Camanche Tank Rehabilitation & Lateral Replacement Project (for the DAC of Lake Camanche Village) and CCWD's West Point Water Main & Tank Replacement Project (for the DAC of West Point). The first project mentioned will directly serve the DAC named Lake Camanche Village, while the latter will provide benefits to the DAC of West Point. As shown in Figure 1, these two projects lie within the DACs discussed herein and directly benefit these communities.

Both the West Point and Lake Camanche Village communities have aging, unreliable water infrastructure delivering their water supplies. Calaveras County Water District operates the domestic water system that serves approximately 560 connections in West Point. The water system is such a deteriorated condition that CCWD estimates nearly 25% of the treated water conveyed to the system is lost due to leaking pipelines and storage tanks. The water system is one of the oldest in the area and entirely sub-standard in terms of capacity to deliver fire flows and overall reliability to serve to the community. The West Point Water Main & Tank Replacement Project will provide immediate improvement in water savings, water pressure, capacity, and fire flows for the DAC.

Similar to West Point, Lake Camanche Village has high water losses and severe operating restraints throughout its water system, owned and operated by Amador Water Agency. The existing redwood storage tanks suffer from weather damage, general decay and small animal damage. In order to reduce water waste, the high levels of these tanks have been

operationally lowered. Several iterations of lowering the tank high levels have significantly reduced the storage capacity of the tanks below their nominal capacity, several feet in some cases. These reduced storage capacities of the tanks have reduced the emergency availability of water during power failures, fire events, and drought situations by approximately 13%. While AWA regularly performs modifications and corrections to infrastructure leaks, the old redwood storage tanks continue to be a substantial contributor to system water losses. Additionally, the service laterals are aging and they regularly leak and fail, causing significant damage to other infrastructure and substantial water losses. The implementation of the Lake Camanche Tank Rehabilitation & Lateral Replacement Project would improve the reliability of the portion of the Amador Water System serving Lake Camanche Village, minimize system water losses, reduce required maintenance, and minimize lost revenue.

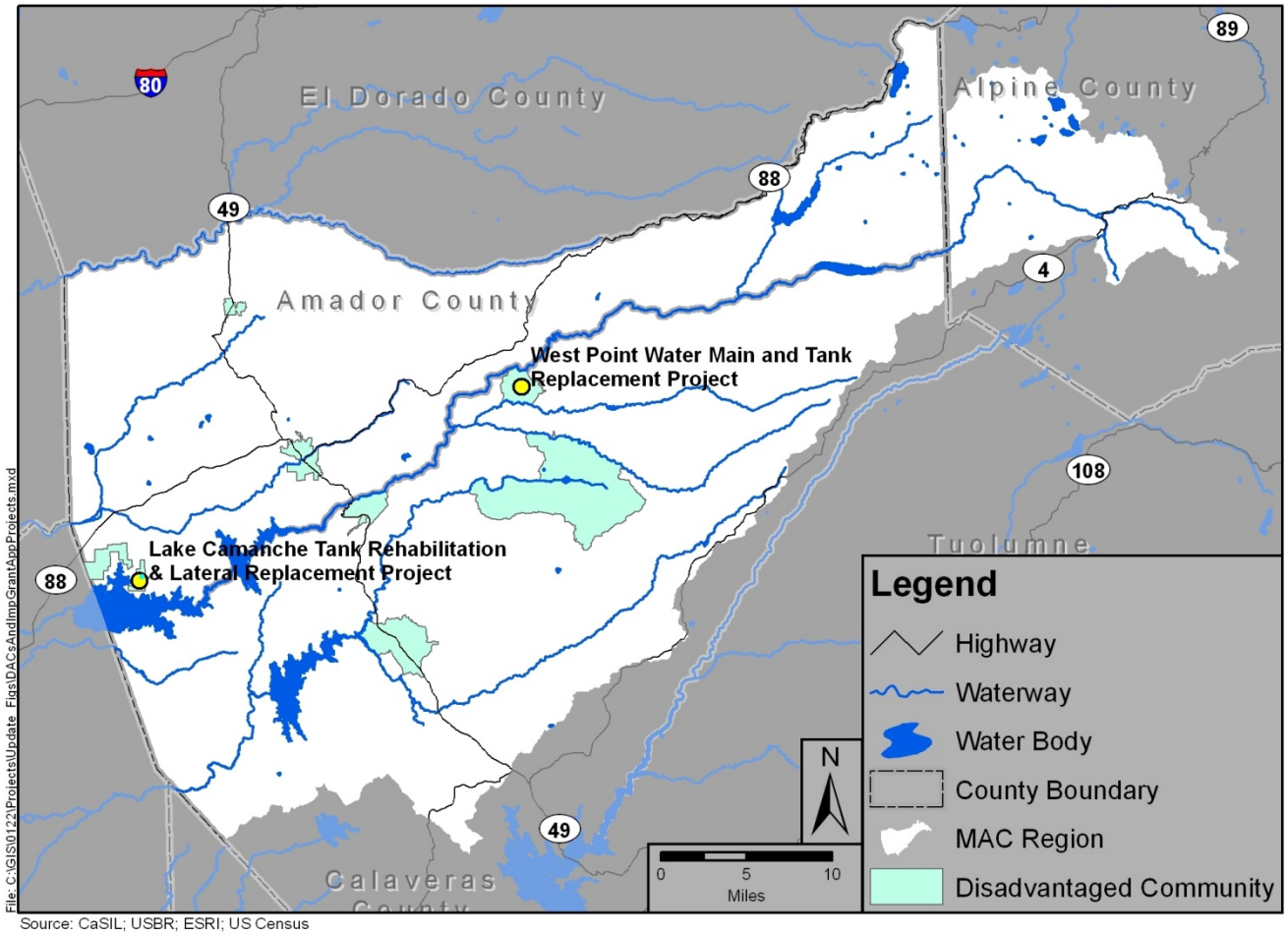

Figure 1: Project Locations

If these projects are implemented, there is a 100% certainty that that this Program Preference will be met. These projects will directly address a critical water supply issue, namely water supply reliability for the DACs of Lake Camanche Village and West Point, as well as an on-going water quality problem at Lake Camanche Village.

Program Preference: Address Statewide Priorities

The Statewide Priorities that the Proposal addresses include the following:

1. Drought Preparedness
2. Use and Reuse Water More Efficiently
3. Climate Change Response Actions
4. Ensure Equitable Distribution of Benefits

These Statewide Priorities are met by at least one project, but in most cases a combination of the projects. The manner in which these are met is discussed in the following sections.

Drought Preparedness

All four projects included in this Proposal will contribute to drought preparedness for the MAC IRWM Region. When the projects contained herein are implemented, the Statewide Priority will be met on a local basis, increasing drought preparedness and increasing water supply reliability for the AWA and CCWD service areas by contributing to sustainable water supply and improving overall water system reliability, year-round and during water shortages.

The Lake Camanche Tank Rehabilitation & Lateral Replacement, Amador Water System Leak Detection & Repair Program, and West Point Water Main & Tank Replacement Project all consist of repairing or replacing aged infrastructure, reducing water losses and increasing or restoring water system operational efficiency. Currently, the AWA water system in the Lake Camanche Village area and CCWD's system in the West Point area have high volumes of water loss. By improving the infrastructure and reducing leakage, these agencies are promoting water conservation, improving efficiencies, and reducing dependence on Mokelumne and Calaveras River water supplies. At all times, but especially during a drought, it is important that water not be wasted and that water be efficiently used to meet the needs of the Region.

Use and Reuse Water More Efficiently

Similar to the Drought Preparedness Statewide Priority, the Lake Camanche Tank Rehabilitation & Lateral Replacement, Amador Water System Leak Detection & Repair Program, and West Point Water Main & Tank Replacement Project will also help contribute to this Statewide Priority by using potable water resources more efficiently.

The Lake Camanche Tank Rehabilitation & Lateral Replacement project consists of installing flexible geomembrane liners in five existing redwood storage tanks that have high amounts of water leakage. Additionally, 300 linear feet of service laterals from the 1970s will be replaced; these aged pipelines have been subject to severe cracking leading to substantial water losses within the AWA system.

Similarly, another portion of the Amador Water Agency's water system, the Amador Water System (AWS), is old and experiencing lots of water waste due to inefficiencies. This project consists of installing water master meters in order to identify exactly which portions of the AWS are experiencing the greatest amount of water loss and therefore require replacement or rehabilitation. In Table 2, the AWS Leak Detection & Repair Program was shown as having a moderate to high level of certainty of achieving this Statewide Priority. This is because the project consists of installing meters to identify water infrastructure with the greatest need of replacement or rehabilitation; AWA plans to prioritize the identified needs as part of this project, but the actual infrastructure replacement and/or rehabilitate will occur during later phases of the project. Ultimately, the project will improve water efficiency within the AWS, improve water supply reliability, and maximize existing water resources for domestic, commercial and agricultural uses.

The West Point Water Main & Tank Replacement Project will achieve the same goals as described above for the Lake Camanche Village project, but for the Calaveras County Water District. CCWD's domestic water system in the West Point community, a DAC, is currently in such a deteriorated condition that CCWD estimates nearly 25% of the treated water conveyed to the system is lost due to leaking pipelines and leaking tanks. The water system is one of the oldest in the area and entirely sub-standard in terms of capacity to deliver fire flows and overall reliability to serve the community. This project will provide immediate improvement in water savings, water pressure, capacity, and fire flow for the community, with a significant certainty that water will be used more efficiently.

Climate Change Response Actions

The four projects presented in this Proposal provide climate change response actions in various fashions. As with the Drought Preparedness priority described above, the Lake Camanche Tank Rehabilitation & Lateral Replacement, Amador Water System Leak Detection & Repair Program, and West Point Water Main & Tank Replacement Project promote potable water resources use efficiency. This water use efficiency, in turn, results in less water being diverted and treated to meet regional water demands which ultimately reduces energy demands and greenhouse gas (GHG) emissions.

The fourth project in this Proposal, the Camanche Regional Water Treatment Plant Project, will, when fully implemented, provide potable surface water to the communities of Burson and Wallace, in addition to Lake Camanche Village, CASS and CANS. Burson and Wallace currently depend solely on groundwater supplies, and the availability of treated surface water will provide an opportunity for these communities to conjunctive manage their water supply sources.

Ensure Equitable Distribution of Benefits

This Proposal has increased the participation of disadvantaged communities in the MAC IRWM process by including projects that will directly benefit the DACs of Lake Camanche Village and West Point. Two of the four projects included in this proposal will improve water supply reliability and water quality for DACs and will ensure safe drinking water is available to these communities. The projects that contribute to this Statewide Priority are the

Lake Camanche Tank Rehabilitation & Lateral Replacement project and the West Point Water Main & Tank Replacement project. The MAC Region has strived to reach a diverse group of stakeholders and include DACs in both the IRWM planning process and the implementation of projects include in the adopted 2006 IRWM Plan. A balanced and diverse representative of community stakeholder interested has been achieved, including special outreach to the DACs of West Point and Lake Camanche. These projects directly support the ailing infrastructure in these communities and will help both the communities and their respective water purveyors in minimizing future costs for potable supplies by reducing water losses, minimizing future infrastructure maintenance and improving water system efficiencies.